

IN THE TITLE:

Please replace the original title with the one noted below:

METHOD FOR CONVERTING CODE AND CODE
CONVERSION APPARATUS THEREFOR

IN THE SPECIFICATION:

Please amend the specification as follows:

Please amend pages 14 and 15, paragraph beginning on line 7, page 14:

Fig. 2 is a diagram showing a configuration of a code conversion apparatus according to a first embodiment of the present invention. A code conversion method described below can be realized by the code conversion apparatus shown in Fig. 2. Referring to Fig. 2, the code conversion apparatus according to the first embodiment of the present invention includes an LP coefficients code converting circuit 1100 as a linear prediction coefficients code converting circuit, an LSP-LPC converting circuit 1110, an impulse response calculating circuit 1120, a partial speech decoding circuit 1500, a second excitation signal data generating circuit 2600 as an excitation signal data generating circuit, a second excitation signal data calculating circuit 1610, and a second excitation signal data storage circuit 1620, a code multiplexing circuit 20 1020. Here, the same reference number is given to a component which is identical to or similar to the component in the conventional technique shown in Fig. 1. In Fig. 2, an input terminal 10, an output terminal 20, a code demultiplexing circuit 1010, and a code multiplexing circuit 1020 are basically the same as the components shown in Fig. 10 except that a part of the connections are diverged.

Please amend pages 47 and 48, paragraph beginning on line 27, page 47

The optimum ACB gain calculating circuit 2230 receives the first target signal $x(n)$ outputted from the target signal calculating circuit 2210, and receives the filtered past excitation signal $y_d(n)$ with the delay d which is outputted from the ACB encoding circuit 2220. Here, the delay d is the second ACB delay. Next, the optimum ~~ABG~~ ACB gain g_p is calculated from the first target signal $x(n)$ and $y_d(n)$ on the basis of the following equation.

Please amend pages 48 and 49, paragraph beginning on line 21, page 48

The FCB code generating circuit 1300 receives the first target signal, the second ACB signal and the optimum ACB gain outputted from the ACB code generating circuit 2200, and receives the impulse response signal outputted from the impulse response calculating circuit 1120. The FCB code generating circuit 1300 calculates the second target signal by using the first target signal, the second ACB signal, the optimum ACB gain, and the impulse response signal. Next, the FCB code generating circuit 1300 obtains an FCB signal whose deviation from the second target signal takes the minimum value, by using the second target signal, the FCB signal stored in a table built-in the FCB code generating circuit 1300, and the impulse response signal. The code, which is decodable in the second system and corresponds to the FCB signal, is outputted to the code multiplexing circuit 1020 as the second FCB code. The calculated FCB signal is outputted to the gain code generating circuit 1400 and the second excitation signal ~~calculation~~ calculating circuit 1610 as the second FCB signal.

Please amend pages 51 and 52, paragraph beginning on line 20, page 51

The selected FCB signal is used as the second FCB signal $c(n)$. The code, which is decodable in the second system and corresponds to the second FCB signal, is outputted as the second FCB code to the code multiplexing circuit 1020 through an output terminal 55. The second FCB signal is outputted through an output terminal 85 to the gain encoding circuit 1410 in the gain code generating circuit 1400 and the second excitation signal ~~calculation~~ calculating circuit 1610. With regard to the method of expressing the FCB signal, a multi-pulse signal which includes a plurality of pulses and is defined by pulse positions and pulse polarities can be used for

efficiently expressing the FCB signal. In this case, the second FCB code corresponds to the pulse positions and the pulse polarities. As for the details of the encoding when the FCB signal is expressed by the multi-pulses, the description in the section 3.8 of the conventional art document No.3 can be referred to.

Please amend pages 54 and 55, paragraph beginning on line 12, page 54

Fig. 9 is a diagram showing a configuration of the gain code generating circuit 1400. Referring to ~~Fig. 8~~ Fig. 9, the gain code generating circuit 1400 includes a gain encoding circuit 1410 and a gain codebook 1411. The gain encoding circuit 1410 receives through an input terminal 93 the first target signal outputted from the target signal calculating circuit 2210 in the ACB code generating circuit 2200, and receives through an input terminal 92 the second ACB signal outputted from the ACB encoding circuit 2220 in the ACB code generating circuit 2200. Further, the gain encoding circuit 1410 receives through an input terminal 91 the second FCB signal outputted from the FCB encoding circuit 1320 in the FCB code generating circuit 1300, and receives through an input terminal 94 the impulse response signal outputted from the impulse response calculating circuit 1120. The gain encoding circuit 1410 includes a table in which a plurality of ACB gains and a plurality of FCB gains are stored. The gain encoding circuit 1410 reads the ACB gains and the FCB gains from the table sequentially, and calculates sequentially a weighed reconstruction speech by using the second ACB signal, the second FCB signal, the impulse response signal, the ACB gain, and the FCB gain. Also, the gain encoding circuit 1410 sequentially calculates square errors between the weighed reconstruction speeches and the first target signals, and selects an ACB gain and an FCB gain with which the square error takes a minimum value. Here, the square error is expressed by the following equation